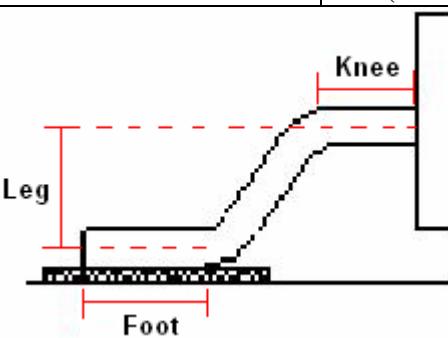


Package: QFN SnPb

Feature	Value [mm] (in)
Package length Fig 3	5.0151 (0.1974)
Package width Fig 3	5.0151 (0.1974)
Package thickness	0.86 (0.0338)
Pitch Fig 6	0.65286 (0.0257)
Mass	0.06 g
CTE Strain Gauge Technique Temp range -50°C to 100°C Linear Correlation	8.361 ppm/°C (X - axis) 8.128 ppm/°C (Y- axis)
Die length Fig 5	2.268 (0.0893)
Die width Fig 5	2.268 (0.0893)
Die thickness Fig 5	0.2601 (0.0102)
Termination width Fig 6	0.28335 (0.0111)
Termination thickness Fig 6	0.2236 (0.0088)
Minimum Termination gap Fig 6	0.36951 (0.01455)
	
Termination length Fig 6	0.62024 (0.0253)
Lead leg length	N/A
Lead knee length	N/A

Feature	Value
Lead/Termination Base Metal Alloy	Cu 0.2236 Fig 5,8 (0.0088)
Lead/Termination Metallization / thickness	SnPb (83/16) 15 [μm] Fig 11,12 (0.000591)
Plating 1 metallization / thickness	Ag/8.238[μm] Fig 7,9 (0.000324)
Plating 2 metallization / thickness	N/A
Plating 3 metallization / thickness	N/A
Over-plate to protect during cross section?	No
Diameter of solder balls	N/A
Solder ball alloy (SEM or XRF estimate)	N/A
Width of solder ball in contact w/ component pad	N/A
Width of component pad	N/A
Thickness of component pad	N/A
Diameter of solder mask opening	N/A

August 2008

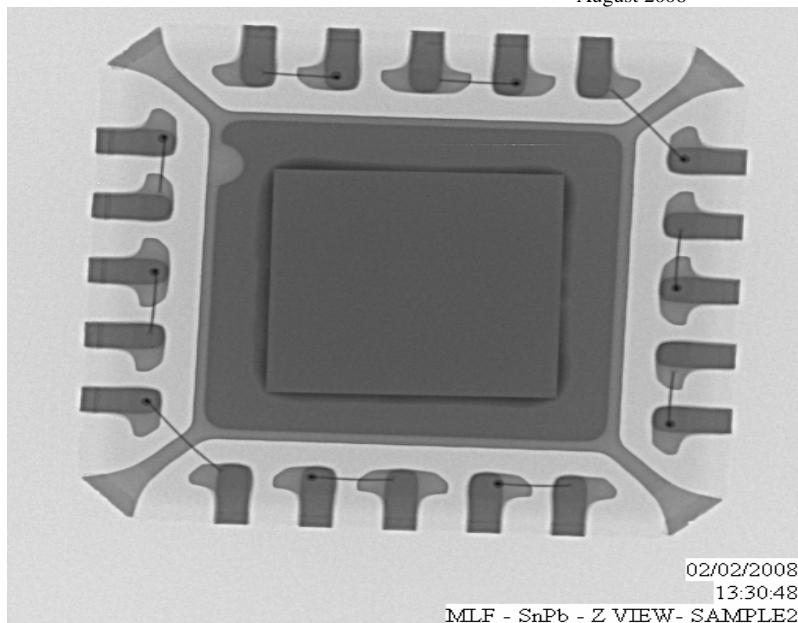
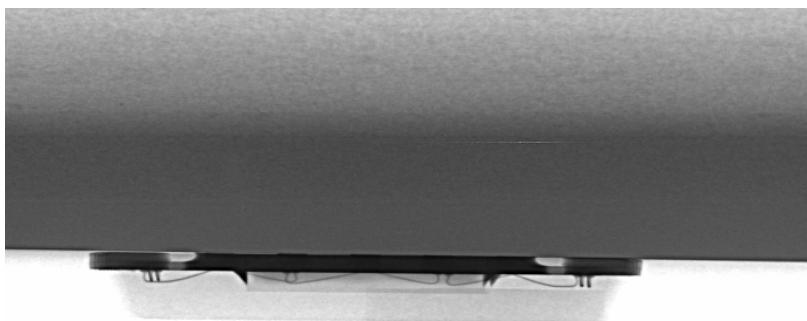


Fig.No.1 QFN SnPb, X-ray, View Z



02/02/2008
13:49:25
MLF - SnPb - X VIEW- SAMPLE2

Fig.No.2 QFN SnPb, X-ray, Inclined X-axis View

August 2008

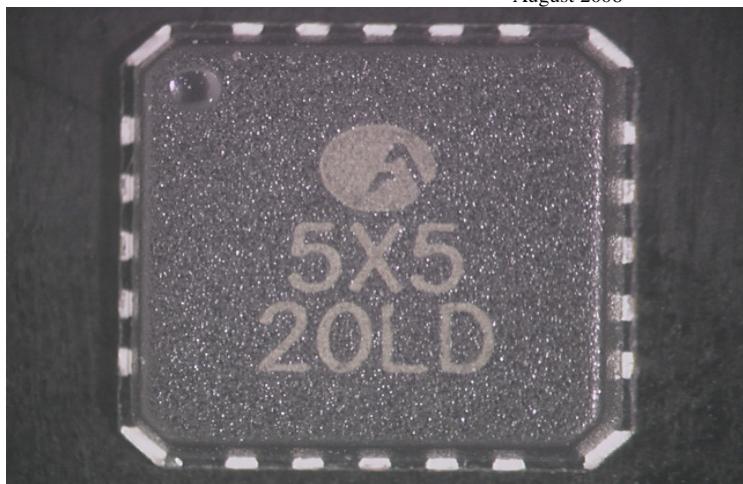


Fig No3. QFN SnPb, Top View M~24X

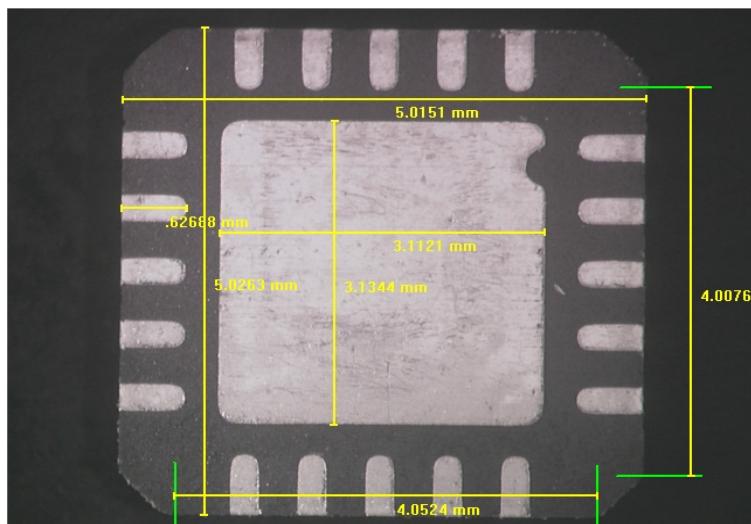


Fig No .4 QFN SnPb, Bottom View M~24X

August 2008

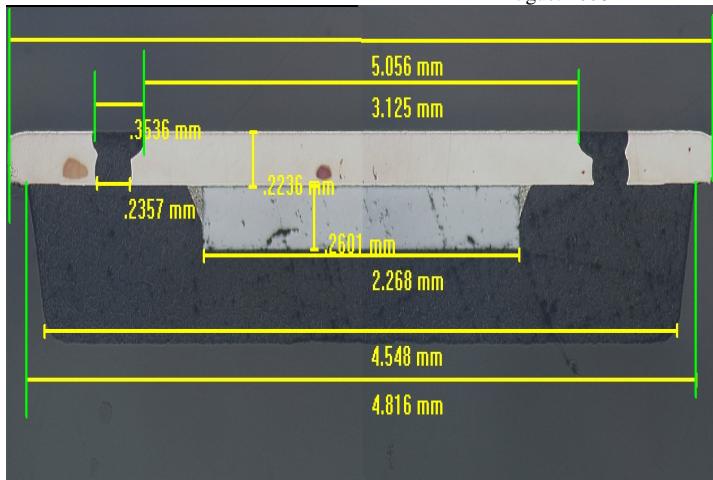


Fig No .5 QFN SnPb, Cross section, M~64X

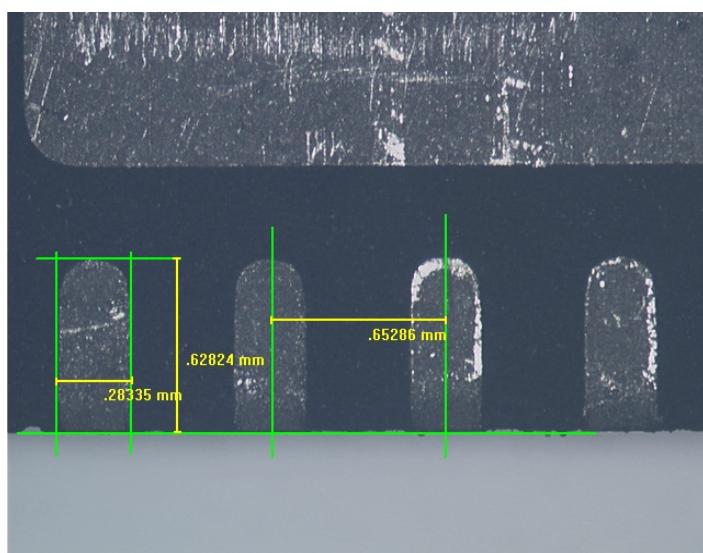
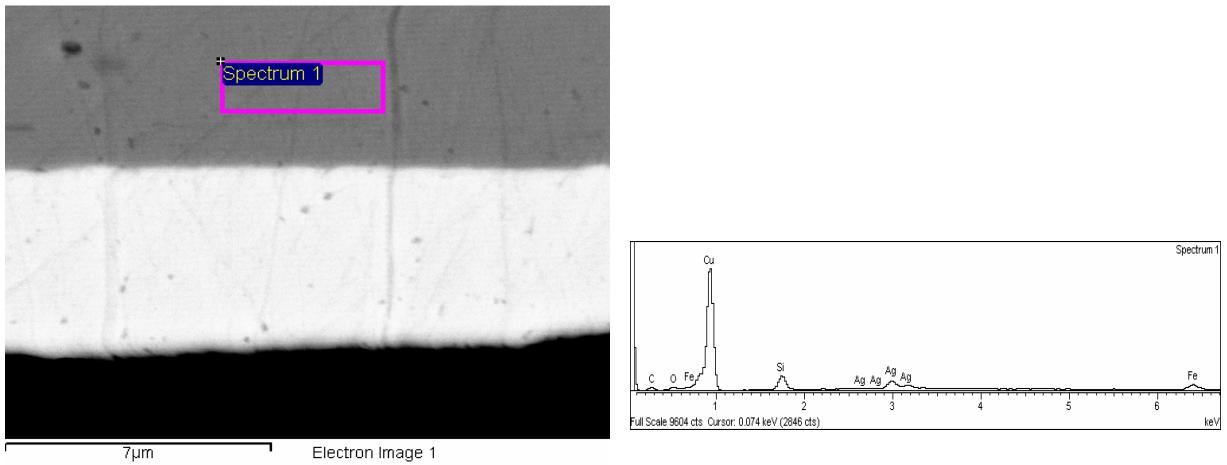


Fig No .6 QFN SnPb, Bottom View M~64X

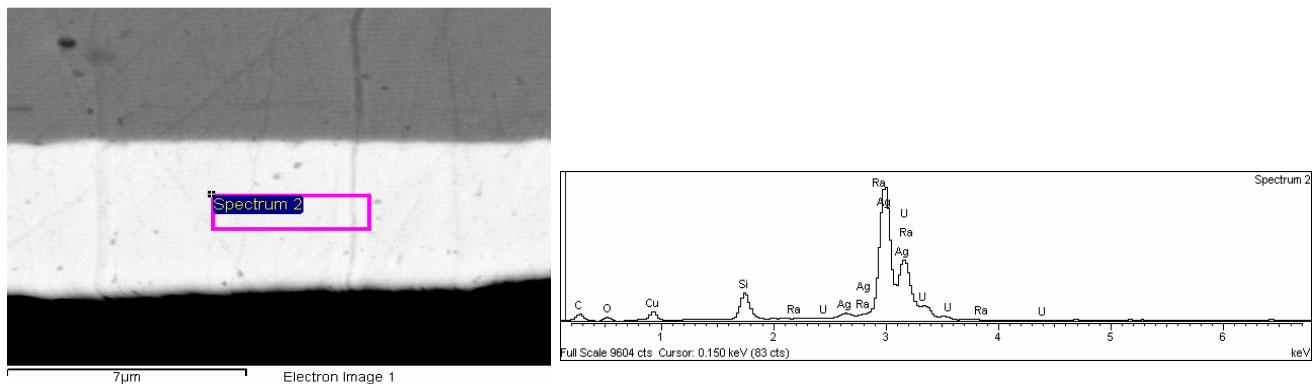


Fig No .7 QFN SnPb, Cross section, Pad/Plating/Solder M~768X



Element	App	Intensity	Weight%	Weight%	Atomic%
	Conc.	Corrn.		Sigma	
C K	36.19	0.2936	14.08	0.90	42.78
O K	14.60	0.5605	2.98	0.42	6.79
Si K	17.48	0.3877	5.15	0.17	6.69
Fe K	16.70	1.1553	1.65	0.08	1.08
Cu K	589.33	0.9396	71.67	0.84	41.15
Ag L	30.47	0.7785	4.47	0.21	1.51
Totals			100.00		

Fig No .8 QFN SnPb, Pad Material Analysis



Element	App Conc.	Intensity	Weight%	Weight%	Atomic%
	Conc.	Corrn.		Sigma	
C K	54.45	0.7732	8.33	0.55	29.07
O K	26.43	0.2568	12.18	0.87	31.90
Si K	33.31	0.6063	6.50	0.17	9.70
Cu K	48.34	0.9041	6.32	0.20	4.17
Ag L	492.82	0.9240	63.07	0.88	24.51
Ra M	13.34	0.9638	1.64	0.38	0.30
U M	16.28	0.9764	1.97	0.55	0.35
Totals			100.00		

Fig No .9 QFN SnPb, Pad Plating Material Analysis

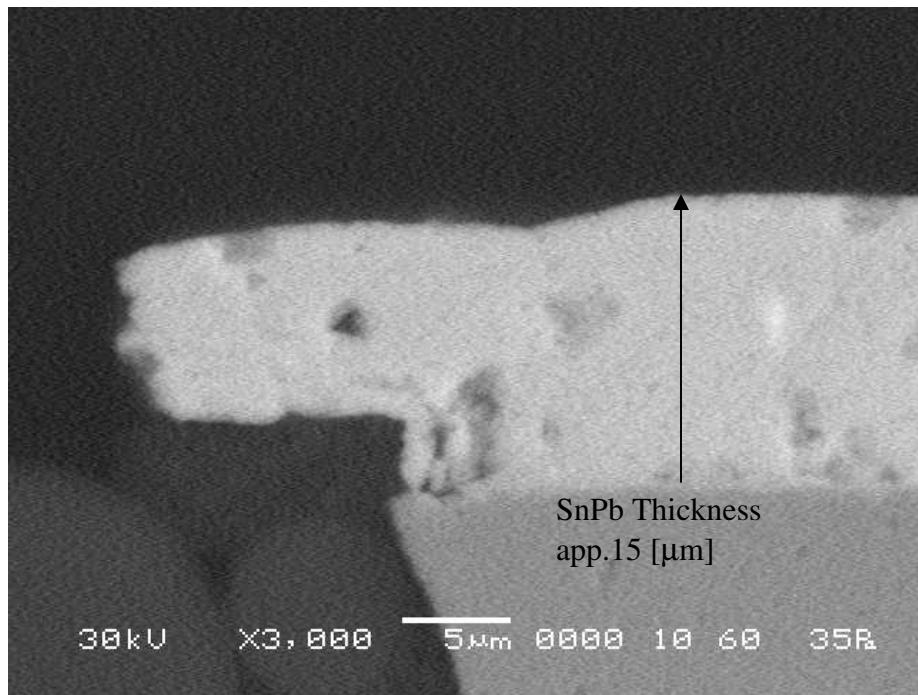
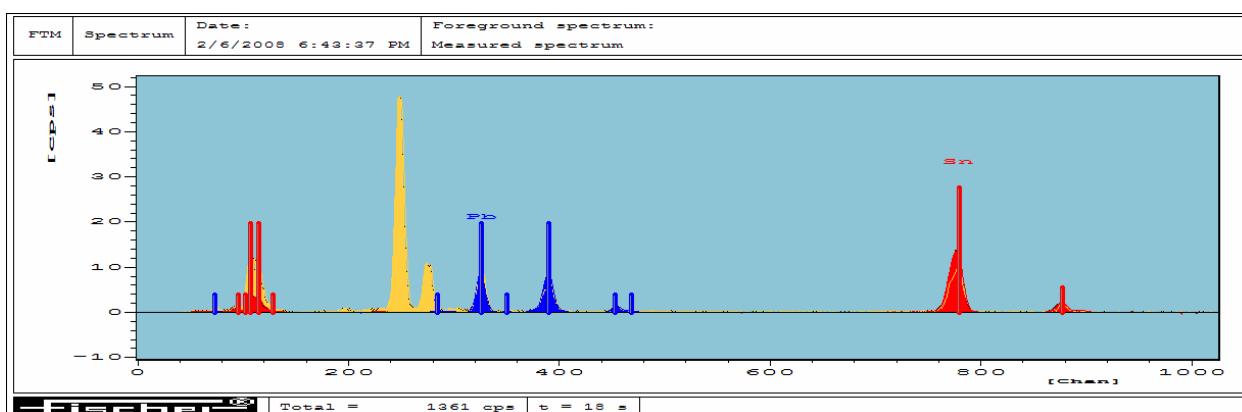


Fig No .11 QFN SnPb, Termination Metallization Top Layer SnPb

August 2008



Foreground: Measured spectrum

Meas. para. (foreground spectrum):

High voltage = 50 kV (875) Prim. Filter = Ni

Collimator 3 = 0.60 Dm. Anode current 218 uA

Meas. distance = 0.003 inch

Results of analysis: (%)

50	Sn	=	83.28
82	Pb	=	16.72

Fig No .12 QFN SnPb, Termination Material Analysis by XRF